

# STRATEGY RESEARCH PROJECT

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## FRATRICIDE: THE RESULT OF UNDISCIPLINED AGGRESSIVENESS

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**FRATRICIDE:  
THE RESULT OF UNDISCIPLINED AGGRESSIVENESS**

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## ABSTRACT

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Commanders realize that, while engaged in combat, they may suffer casualties. They do not, however, accept that a portion of these casualties may be inflicted by their own troops. Fratricide, the result of undisciplined aggressiveness, has plagued U.S. military forces from the Revolutionary War through current military operations. A brief review and analysis of documented fratricide incidents within the context of doctrine is provided. Understanding that doctrine must be broad in scope to encompass the "how" to conduct military campaigns, major operations, and battles, more restrictive rules of engagement (ROE) are developed and married with doctrine establishing command guidance. The key to reducing fratricide incidents is to foster an environment which commanders at all levels encourage disciplined aggressiveness to meet mission requirements. The thesis of this paper is that commanders must ensure all actions are accomplished within established doctrine and current ROE; if not, recklessness is the result, and fratricide is the price.

## INTRODUCTION

Instances of fratricide punctuate the history of war, sometimes with devastating results. Fatalities inflicted by the unintentional engagement of friendly forces are as old as warfare itself. Fratricide has been a battlefield reality for the U.S. military forces from the Revolutionary War through present day military operations. Fratricide increases the risk of acceptable losses and defeat by causing loss of confidence in unit leadership, leader self-doubt and hesitation, loss of initiative and aggressiveness, oversupervision of units, disrupted operations, and a general degradation of cohesion and morale.<sup>1</sup>

Recent combat operations and trends studied at the Combat Training Centers (CTCs) indicate that friendly fire casualties are an increasing peril of modern warfare. In previous 20th century battles, supporting fires (air and artillery) accounted for almost 75 percent of fratricide incidents. With current direct fire technology advances, this proportion may be changing.<sup>2</sup> One of the most comprehensive studies regarding the historical difficulties with fratricide was done at Leavenworth's Combat Studies Institute. Amicicide: The Problem of Friendly Fire in Modern War indicates that since World War I roughly two percent of casualties are caused by friendly fire with the primary cause the result of human error. The gunner miscalculates data, the pilot programs the computer with the wrong codes, human errors are the most frequent occurrences that

traditionally led to fratricide. Target misidentification only began to grow as a significant factor since World War II, with the general wisdom placing the blame at the increased speeds and altitudes at which modern aircraft operate.<sup>3</sup> The modern battlefield has expanded in terms of speed, space, and time. Such an increasingly complex, dynamic, and lethal battlefield can only serve to increase the likelihood of fratricide.

With the intense media scrutiny of the Persian Gulf War, most people have a fairly accurate idea of what is meant by fratricide, often called "friendly fire." Surprisingly, fratricide is not defined in Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms, nor in AF Manual 1-1, Volumes 1 or 2. Literally, fratricide means "the act of killing one's brother."<sup>4</sup> A more complete definition is needed for the purposes of this paper, however. U.S. Army Field Manual 100-5, Operations, defines fratricide as "The employment of friendly weapons and munitions with the intent to kill the enemy or destroy his equipment or facilities, which results in unforeseen and unintentional death or injury to friendly personnel."

Doctrine can play an important role in preventing fratricide. Doctrine focuses combat power to achieve victory on contemporary and future battlefields. It explains how to conduct campaigns, major operations, battles, and engagements in conjunction with other services and allied forces<sup>5</sup>. It is doubtful, however, whether doctrine can totally eliminate the

risk of fratricide. Therefore, the purpose of this paper will be to discuss doctrine's role in limiting fratricide. This will be accomplished by giving an historical perspective of doctrine and fratricide by analyzing selected incidents from World War II, Vietnam, and the Persian Gulf War. In addition, an in-depth discussion of perhaps the worst example of fratricide which occurred on April 14, 1994, the shootdown of two U.S. Army UH-60 Black Hawk helicopters by USAF F-15s during the coalition operation, PROVIDE COMFORT, will be analyzed. Finally, current U.S. Army and U.S. Air Force doctrine regarding fratricide will be discussed, reiterating that the key to reducing fratricide incidents is the commander.

## HISTORICAL PERSPECTIVE

### Introduction.

Commanders who lead their troops in combat realize that they may suffer casualties in the process. This is an inevitable by-product of war and is taken for granted. However, they do not take for granted that a portion of their casualties will be inflicted by their own forces. Yet, in each of America's wars from World War I through Operation Desert Storm, a significant number of U.S. personnel have been killed and wounded as a direct result of friendly fire.<sup>6</sup> In order to get a perspective of the seriousness of fratricide, this paper will include a few

documented cases from previous wars. This review will focus on air-to-ground, ground-to-air, air-to-air, and ground-to-ground fratricide.

In his book, On War, Carl von Clausewitz explains that the critical analysis of historical examples can serve many purposes. Historical examples can help explain or show application of an idea or concept, support or validate the possibility of such an idea or concept, or in combination with several events be used to distill the essential truths of the matter and then arrive at a consensus of thinking or doctrine.<sup>7</sup> Further, historical studies are especially valuable in peacetime by supplying evidence that can otherwise only be simulated.

#### World War II.

The difficulties posed by terrain, weather, and hard fighting against a competent and determined enemy contributed to the many cases of fratricide in World War II.

Operation FORAGER, the invasion of Saipan, began with the amphibious assault by the 2d and 4th Marine Divisions on June 15, 1944. They were joined by the Army's 27th Infantry Division and were pressing against Japanese forces in the mountainous terrain in the central portion of the island. The terrain was extremely steep and heavily wooded with numerous high cliffs, which made the maintenance of contact with flanking units especially difficult. On June 29, the regiments of the 27th Division began to experience problems with uncoordinated artillery fires. While

trying to recapture Hill King, Company K had climbed half-way to the crest when they came under intense Japanese rifle fire.<sup>8</sup>

From the book, The 27th Infantry Division, the author relates what happened next.

The company commander then assumed that the fire was coming from a small party of stragglers and dispatched a squad to circle the hill. As they started out on the patrol, the (friendly) artillery preparation (for Company E attacking from the other side) began landing on Hill King. The first 15 shells landed squarely in the midst of K Company, wounding 19 men. Company K was able to get over the top of the hill and, by hand fighting, managed to clear the hill of Japanese.

During the remaining day until Saipan was declared secure, reports continued to flow into other regiments requesting cease fire of friendly artillery falling on American troops. Even the planes dropping surrender leaflets to the Japanese inaccurately dropped them behind friendly lines. In fact, almost every major operation in the Pacific Islands was punctuated by instances of misplaced artillery fire. The usual problems of weather and terrain were further complicated by the presence of both Army and Marine Corps units and the frequent use of naval gunfire which required increased coordination.

Another example involved the retaking of Kiska Island in the U.S. Aleutians southwest of Alaska, or Operation COTTAGE. The 5,000-man Japanese garrison at Kiska quietly evacuated the island in a dense fog on June 28, 1943, anticipating a U.S. invasion. For three weeks after their departure, U.S. air and naval forces continued to shell the abandoned island. Even when aerial



reconnaissance indicated that the Japanese had evacuated, the commander of the North Pacific Force decided to go ahead with the planned full-scale invasion, if only for exercise purposes.

The invasion force consisted of men from the 7th Infantry Division, Alaskan 4th Regiment, 87th Mountain Combat Team, 13th Royal Canadian Infantry Brigade, and the 1st Special Service Force. The force had less than a week preparatory training on Adak Island, studied a map of Kiska based on aerial photos from 1935, and hastily practiced an amphibious landing in new, untried arctic gear. It is also significant to note that until the landing on Kiska, the Regimental Headquarters of the 87th Mountain Infantry had never participated in a regimental field exercise of more than 12 hours duration. Also, SOPs varied greatly since none of the units in the invasion force had ever trained together.<sup>9</sup>

The first assault waves came ashore on the main beach and were met by abandoned dogs. A post-operation report noted:

Much of the time visibility was extremely limited, and recognition of our own troops was impossible beyond 5-10 yards. Because of the high wind, voice recognition was impossible, and patrols 15 yards apart could not tell when they had been challenged.<sup>10</sup>

The initial force started shooting into the fog. One infantryman engaged an "enemy patrol" who shouted to him to stop. When he began to throw grenades, he was shot down. One patrol sent out from its platoon returned to report, "We were afraid to go

through the 87th Infantry area at night. They have already shot five of their own men."<sup>11</sup>

By nightfall on August 16th, 24 men were shot to death by their own comrades in the fog. Booby-traps and mines killed 4 others; 50 were wounded, booby-trapped or shot by mistake. Even though Operation COTTAGE was considered a satisfactory invasion, nothing can disguise the fact that for more than two weeks, the allies bombarded an abandoned island and then deployed 35,000 soldiers, 313 of whom became fratricide casualties--against a nonexistent enemy.<sup>12</sup> Doctrine published prior to Operation COTTAGE provided only sketchy guidance for reducing fratricide during periods of limited visibility. FM 7-10, Rifle Company, Rifle Regiment, states that a means of identification for all personnel must be prescribed so that any personnel moving to the objective before daylight can be identified. Equally as ambiguous, FM 7-5, Organization and Tactics of Infantry, the Rifle Battalion, states, "Men must be as careful in returning as in starting out in order to avoid hostile patrols and to keep from being fired upon by friendly sentries." The lack of situational awareness which caused the misapplication of combat forces can be attributed to inadequate doctrine, poor commander guidance, and minimal preparatory training, which resulted in the unacceptable level of fratricide.<sup>13</sup>

Vietnam.

Rough terrain, close combat and inadequate coordination were contributing factors in air-to-ground fratricide incidents.<sup>14</sup> In 1968, two USAF bombers were diverted to support a Vietnamese Civilian Irregular Defense Group (CIDG) company in contact with enemy forces. Friendly ground forces marked their position with green smoke because heavy jungle vegetation prevented visual sighting of friendly troop locations from the air. Prior to the attack by the bombers, many changes regarding target position and attack headings were made between the ground commander, the airborne Forward Air Controller (FAC) (controlling the strike), and the strike aircraft. After these changes, one of the aircraft strafed the target area with 20mm cannon fire. During the strike, the rounds impacted on the friendly positions, resulting in four CIDG soldiers killed, 28 CIDG soldiers wounded, and two U.S. advisers wounded. Heavy vegetation, the close proximity of friendly troops to the target, and too many changes given to the pilots were cited as contributory causes.<sup>15</sup>

Another incident included two U.S. soldiers killed and three wounded near Pleiku in August 1969 when fired upon by the crew of a UH-1H helicopter. The commander was providing a new crew with an orientation flight when smoke was spotted coming through the trees. The crew chief and gunner were directed to fire on the unidentified smoke and did so, hitting an American unit.<sup>16</sup> Here, of course, blatant pilot error was the suggested cause of such an ill-considered decision.

As early as 1964, the increased rate of fratricide in Vietnam became a serious matter of concern to the Commander, U.S. Military Assistance Command, Vietnam (MACV). He directed commanders to take appropriate corrective action by constantly reviewing and updating training programs and safety directives, and by strictly enforcing approved operational procedures and Rules of Engagement (ROE). The U.S. Army Continental Army Command (CONARC), also concerned with fratricide identified by the MACV, recommended increased practical training emphasis on troop-leading procedures, map reading, identification and recognition, and patrolling. Unfortunately, these new techniques and procedures failed to progress beyond the individual and small unit training. Adherence to proven techniques and established procedures remained the rule. Hence, except for minor adjustments to tactics, Vietnam-era doctrine regarding fratricide reduction remained relatively unchanged.<sup>17</sup>

#### Persian Gulf.

As American units wheeled and maneuvered to execute the hugh flanking movement that was to encircle and destroy Iraqi ground forces, the fringes of two U.S. Army Corps became entangled. An armored cavalry unit, spotting the combat engineers on its perimeter, grew convinced that they were Iraqis; the engineers thought the same of the cavalry. What followed was chilling and tragic. The troopers issued a radio challenge, followed by a warning in Arabic. They fired shots over the engineers' heads. Then the cavalry advanced. The engineers ran. From a pursuing Bradley Fighting Vehicle came a machine gun burst . . . one soldier dead, a fellow engineer badly wounded.<sup>18</sup>

The Persian Gulf War, like every other war, was unique. The desert environment was ideally suited to employment of armored forces and airpower, and was basically free of noncombatants. The fact that thousands of American tanks and combat vehicles would be fighting side by side with Arab units using Soviet-built tanks that looked like Iraqi vehicles initiated an early interest in reducing fratricide. Nevertheless, the initial attack by Iraqi forces at Al Khaffi, Saudi Arabia, resulted in fratricide to U.S. ground forces. On January 29, 1992, an Air Force A-10 Thunderbolt was ordered to provide Close Air Support (CAS) for eight to ten Marine Light Armored Vehicles (LAVs) who were preparing to engage 50 Iraqi armored vehicles moving south toward Saudi Arabia. The A-10 made two passes in order to identify the Iraqi vehicles and dropped a flare in the area of the Marines' position as a reference point. The Forward Observer on the ground told the pilot not to attack unless he could positively identify an Iraqi vehicle. The A-10 pilot fired a single infrared-guided Maverick missile which struck a Marine LAV, killing seven and wounding two Marines. A military investigation attributed the fratricide to a technical malfunction, however, others familiar with the incident said that the pilot misidentified the target--the missile functioned just fine.<sup>19</sup>

This review of past fratricide incidents concludes the examination from an historical perspective except for one incident that occurred several years after the end of Operation DESERT STORM: the Apache Helicopter fratricide incident of

April 14, 1994. All previous examples of fratricide seem to pale in comparison to this disaster.

#### Operation PROVIDE COMFORT

Up to this point, the analysis of historical fratricide incidents indicates that these events could have been avoided within the framework of two general areas: improved doctrine or more comprehensive ROE, and improved technological advancements. This increased technology is designed to improve situational awareness by clearing the "fog of war." Operation PROVIDE COMFORT, which fratricide analysts call the worst fratricide incident in U.S. military history<sup>20</sup> indicates, however, that these general solutions, improved doctrine and more comprehensive ROE, and technological advances to clear the "fog of war," still fall short of reducing fratricide incidents to acceptable levels. This accident was caused by a breakdown in command guidance and supervision, and the misidentification of the Black Hawk helicopters.

Operation PROVIDE COMFORT involved a coalition force made up of U.S., British, French, and Turkish forces to enforce a no-fly zone in northern Iraq, and a smaller ground-based security zone, to protect ethnic Kurds after the end of Operation DESERT STORM in 1991. The combined task force was formed and headquartered at Incirlik Air Base in Turkey, reporting directly to the U.S. European Command. The task force included an air component, also located at Incirlik, with the air component commander having

tactical control of the aircraft assigned to PROVIDE COMFORT. He was responsible for the scheduling, direction, and control of all coalition aircraft operating in the no-fly zone. The combined task force also included a Military Coordination Center located at Zakhu, approximately six miles inside the Tactical Area of Responsibility (TAOR) in Iraq. Air transportation for the personnel at the Military Coordination Center was provided by a detachment of Black Hawk helicopters located at Diyarbakir in Turkey. Coalition forces conduct daily operations from Incirlik and Diyarbakir, to prevent Iraqi flight activity in northern Iraq. Safety concerns while operating within the TAOR were satisfied by doctrine and ROE that came from the Joint Chiefs of Staff which required all aircraft to radio positions, Airborne Warning and Control System (AWACS) to monitor flight operations, and aircraft to be Identification Friend or Foe (IFF) equipped.<sup>21</sup> Congressional representatives, Secretary of Defense William J. Perry, and U.S. and foreign dignitaries all approved the rules when they were briefed; the ROE were "regularly touted as the perfect ROEs for this type of operation."<sup>22</sup>

To set the stage leading to the events of April 14, 1994, a brief description of key players is needed. The F-15 mission was to ensure the TAOR was clear of any Iraqi aircraft before the arrival of any PROVIDE COMFORT aircraft. Once accomplished, the F-15s were to maintain a defensive patrol to protect coalition forces against any possible intrusion of Iraqi aircraft. The AWACS mission was to provide surveillance detection, threat

warning, and control in the TAOR. This included responsibility to track all friendly aircraft. To accomplish this mission, the AWACS is divided into three areas: an en route controller is responsible for controlling aircraft into and out of the TAOR; an Area of Responsibility (AOR) controller monitors aircraft within the TAOR; and a third controller handles air refueling requirements. There is also a Senior Director who supervises all three controllers and a Mission Commander who acts as the overall mission supervisor. UH-60 Black Hawk helicopters were used for specific roles such as transporting dignitaries or important documents throughout the TAOR. As you can see, PROVIDE COMFORT had the correct doctrine, rules of engagement approved at the highest level, and the best technology the world had to offer.

On April 14, 1994, Eagle 01, a two-ship flight of U.S. Army UH-60 Black Hawk helicopters, was conducting operations within the northwest corner of Iraq. Their mission was to fly from Diyarbakir to Zakhu and pick up Turkish and American co-commanders of the Military Coordination Center and their party, and transport them to the town of Irbil, located in the southeastern part of the TAOR. At approximately 1000L, Eagle 01 flight contacted Cougar (AWACS) and informed the controllers that they were entering the TAOR and proceeding to destination Whiskey (the Iraqi town of Zakhu).<sup>23</sup> The AWACS en route controller, responsible for air traffic into and out of the no-fly zone, responded, electronically identified Eagle 01 flight, assigned electronic symbology "H" for helicopter, and verified the



Identification Friend or Foe (IFF) code. At approximately 1030L, Eagle 01 flight notified Cougar "Zakhu" and about 5 minutes later Eagle 01 symbology disappeared from the electronic radar screen (indicating they had landed at Zakhu). This radio call from Eagle 01 flight stating "Zakhu" is considered normal terminology since Eagle 01 flight assumed Cougar was providing flight following for them and they had reached their destination.

At 1035L the lead element of the day's air package, Tiger 01 Flight, two USAF F-15s, departed Incirlik Air Base en route to the TAOR. Shortly after takeoff, the AWACS en route controller established radar and IFF contact with Tiger 01 flight.

At 1050L, Eagle 01 flight contacted AWACS and stated "airborne proceeding Whiskey to Lima." The AWACS en route controller acknowledged the call, reidentified the "H" and the Eagle 01 IFF code. Due to the flight path and altitude over the mountainous terrain of Eagle 01 flight, radio contact and electronic surveillance updates became intermittent and frequently the AWACS controllers could not talk to or electronically monitor Eagle 01. Although the radar and IFF returns from the Eagle 01 flight had faded from the AWACS scopes, the computer-generated track designation symbol that represented the Black Hawks remained. At 1112L IFF and radar contact with Eagle 01 flight was lost.

At 1120L, 8 minutes later, Tiger 01 flight entered the TAOR, notified the en route controller and changed radio frequencies to the AOR controller. One minute later, at 1121L, an AWACS

controller assumed the helicopters had landed and dropped the track designation symbol from the radar scope. The track symbology was the only remaining visual reminder to the AWACS mission crew that the Black Hawks were operating in the TAOR.

Approximately 2 minutes later, Tiger 01 flight detected and locked on to a radar contact 40 miles southwest of their position within the TAOR. Tiger 01 lead checked IFF codes, specifically the IFF MODES ONE and FOUR assigned for operations inside the TAOR. The Black Hawks were transmitting a MODE ONE code designated for use in Turkish airspace, rather than the code designated for the tactical area, therefore, the F-15s did not receive a MODE ONE response. While Tiger 01 was accomplishing the IFF interrogations, they contacted the AWACS AOR controller and stated "We have a contact bearing 150° at 40 nautical miles." The AOR controller acknowledged, stating "CLEAR." The AOR controller's statement "clear" is normal terminology, indicating to Tiger 01 that the area is clear of any radar or IFF returns.

At 1123L, intermittent IFF returns from Eagle 01 appeared on the AWACS scope in the area of Tiger 01's contact call. At approximately 1124L, the F-15s reported radar contact 20 miles, descending, and the AWACS AOR controller stated, "hits there," which, according to standard terminology, means that AWACS had a radar return at that location.

At 1126L, steady IFF returns and intermittent radar returns from the Black Hawks were displayed on the AWACS radar scopes. These returns were at the same location as the radar contact

reported by Tiger 01. The F-15s were not advised of the IFF returns in the target area. From 1127L until the initial F-15 missile firing at the Black Hawks at approximately 1130L, the F-15s attempted to visually identify the targets. Tiger 01 lead flew a position approximately 1,000 feet left and 500 feet above the Eagle 01 flight path. Traveling at 450 knots, the F-15s rapidly overtook the helicopters which were flying at approximately 130 knots. Tiger 01 lead misidentified the helicopter and radioed "Hind" followed by "No, HIP." He started a climbing right-hand turn to set up a race track pattern behind the helicopters and transmitted "Tiger Two," which was his wingman's call sign, "confirm Hind." The F-15 wingman did a visual identification pass approximately 2,000 feet right and 500 feet above the helicopters. He did not make a positive identification, but he did report, "Tally Two," indicating that he sees two helicopters.

On board the AWACS were indications of amber dots (radar returns) and green dots (friendly IFF returns) that the AOR controller was attempting to identify. Due to the close proximity of the F-15s to the "unknown" return, the attempt was unsuccessful. Thinking that the visual identification by the F-15s had taken place, the AWACS AOR controller responded "Cougar (the AWACS call sign) copies Hinds."

Tiger 01 lead believed his wingman's reply to mean that the identification had been confirmed. At 1130L Tiger 01 fired a radar-guided missile at Eagle 02, and Tiger 02 fired a

heat-seeking missile at Eagle 01, destroying both helicopters and killing 26 men and women, including Americans, French, British, Turks, and Kurds.

#### Analysis.

Command guidance and supervision were the two basic causes of this fratricide incident. First, there was a breakdown in guidance from the combined task force to component organizations, including headquarters staff, the combined forces air component, and the Military Coordination Center. There was no clear understanding among the task force participants regarding their responsibilities for helicopter flight activities. Second, the component organizations did not integrate Black Hawk flights with other air operations in the TAOR. This point is tragically driven home during the play-back of the radio transmissions on April 14, 1994. Eagle 01 flight was using correct security procedures while communicating their flight profile to Cougar, yet Cougar did not know they had flight following responsibilities for helicopters. Therefore, the controller on board the AWACS essentially just responded with an acknowledgement call.

The AWACS AOR controller did not understand Tiger 01 was calling the targets from the fighter's position, therefore, he was looking for the targets in another area of the TAOR. During normal enemy fighter target intercepts conducted by AWACS, a geographically significant ground feature is selected, and all

intercepts make references from that point, not, as in this case, off the nose of the fighter.

The F-15s did not comply with PROVIDE COMFORT ROE. They did not contact the Combined Task Force/Deputy of Operations (CTF/DO) or his representative of suspected Iraqi flight operations within the TAOR; they did not correctly perform a visual identification of the targets; and, more importantly, they did not observe hostile actions by the Black Hawk helicopters.

The initial PROVIDE COMFORT operations plan had not been updated since 1991 and, by the time of the accident, senior leaders were unfamiliar with its contents. The operations plan required AWACS warning and control for helicopters operating in the no-fly zone, yet Black Hawks routinely flew without AWACS coverage. The orders directed that no aircraft would enter the TAOR prior to the fighters' sweep for Iraqi aircraft, yet the command allowed Black Hawks to enter. The Air Tasking Order (ATO) for April 14, 1994, did not list specific times or routes of flight for Black Hawks operating in the area. Although the information was available in the task force headquarters, it was not tasked to the AWACS or to the F-15s.

From a technological perspective, the causes are just as disturbing. IFF MODE ONE checks by the F-15s were unsuccessful because the Black Hawks were using the incorrect code. The reason for the unsuccessful MODE FOUR interrogations could not be determined despite checks of both F-15s, tear-down inspections of all components, computer simulations, and flight testing.

## Conclusion

Doctrine is the "how" in the way the Army and Air Force military forces expect to conduct their operations. Joint Pub 1-02 defines doctrine as:

Fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application.

Neither service to date has a single publication that fully addresses fratricide reduction. Air Force doctrine addresses air-to-ground fratricide reduction in detail at all levels, operational through tactical. The Army's doctrinal concern for fratricide reduction is primarily centered around techniques, tactics, and procedures used at battalion level and below. Meanwhile, the Combat Training Centers are emerging with their own doctrine based on recent combat operations and trends. In addition, current Army and Air Force doctrine fail to take into consideration recent technological changes in warfighting. Neither doctrine accounts for the increasing range and lethality of ground-to-ground weapons and air-to-ground weapons. The traditional use of "positive identification" as a coordination procedure is confused by a greater range of modern standoff weapons, fire weapons, and associated acquisition systems.<sup>24</sup>

As these capabilities have evolved, there has been no corresponding adjustment in doctrine, therefore, a significant doctrine-capabilities gap now exists in both services.<sup>25</sup> The

lack of proper planning and coordination contributes significantly to wartime casualties. However, the lack of positive target identification capability and the inability to maintain situational awareness in combat environments are the major contributors in fratricide. War is tough, uncompromising, and unforgiving. Exercising discipline in operations includes limiting collateral damage--the inadvertent or secondary damage occurring as a result of actions by friendly or enemy forces.<sup>26</sup>

In May 1991, the Army Chief of Staff tasked the Commanding General (CG), U.S. Army Training and Doctrine Command, along with the CG, U.S. Army Materiel Command, to establish a comprehensive program to address positive combat identification. The resulting combat identification task force included representatives from various Army organizations as well as representatives from the USAF Tactical Air Command and the U.S. Marine Corps Combat Development Center. Their conclusive anti-fratricide solutions ranged from doctrine changes to materiel fixes.<sup>27</sup>

It is training and discipline, not technology, that will ultimately reduce fratricide.<sup>28</sup> The best equipment, with untrained and undisciplined crews, cannot accomplish its mission. The new technology will enhance the prevention of fratricide provided the soldiers are adequately trained, the operation is properly planned and coordinated, and the system is fully integrated into the combined forces team.

Friendly fire incidents serve as a reminder that the battlefield is and always has been a strict and harsh

disciplinarian. Those who have deviated from proven techniques, used "short cuts" because it was the "easy way out," or failed to follow directives and established procedures, have done so with disastrous results.<sup>29</sup> While advanced technological devices may certainly be of significant value in reducing fratricide by better location and identification of friendly troops and equipment, and by improved communications and coordination, they cannot provide a total solution to what is essentially a problem of human frailty.<sup>30</sup>

The key to reducing fratricide incidents lies with the commander fostering an environment where training is conducted to established standards without exception and all operations are conducted within established doctrine and approved ROE. Short of this, recklessness will result, and the price will be fratricide.





## ENDNOTES

1. William B. Garrett, "Fratricide: Doctrine's Role in Reducing Friendly Fire," Ft. Leavenworth, KS: School of Advanced Military Studies monograph, 1993, pp. 1-2.
2. CALL Handbook No. 92-03, Fratricide Risk Assessment for Company Leadership, Ft. Leavenworth, KS: U.S. Army Combined Arms Center, Center for Army Lessons Learned, March 1992, p. i.
3. Marine Corps Research Center Battlefield Assessment Team, Armor/Antiarmor, Operations in Southwest Asia, Quantico, VA: 1991, pp. 22-24.
4. Garrett, p. 2.
5. U.S. Army Field Manual 100-5, Operations, Washington, DC: Headquarters, Department of the Army, 1993, p. 1-1.
6. LTC Michael P. O'Conner, "Fratricide: A Preventable Technological Disease," Carlisle Barracks, PA: U.S. Army War College Student Paper, 1992, p. 3.
7. Carl von Clausewitz, On War, edited and translated by Peter Paret and Michael Howard, Princeton: University Press, 1984, pp. 170-171.
8. Charles R. Shrader, Friendly Fire: The Inevitable Price, Carlisle Barracks, PA: Parameters, Autumn 1992, p. xii.
9. Garrett, pp. 5-7.
10. Brian Garfield, The Thousand Mile War, Garden City: Doubleday & Company, 1969, p. 285.
11. Garrett, p. 8.
12. Ibid.
13. Shrader, p. 91.
14. Ibid., p. 56.
15. Ibid.
16. Ibid., p. 59.
17. Garrett, p. 1.
18. O'Connor, p. 1.
19. Garrett, p. 20.

20. John Parker, "Officer Failed to Warn Pilots, Tinker Jury Told," The Daily Oklahoman, June 11, 1995, p. A1. John Parker was one of seven newspapermen dedicated to covering the court martial of USAF Captain Jim Wang in June 1995.

21. John Parker, "Fighter Pilots Broke Rules, Ex-Chief Says," The Daily Oklahoman, June 14, 1995, p. A1.

22. Ibid.

23. Due to security reasons, Black Hawk routes of flights or destinations were encoded; for example, Zakhu was "Lima" and Irbal was "Whiskey." This was standard military operations for Operation PROVIDE COMFORT.

24. Garrett, p. 26.

25. O'Connor, pp. 22-25.

26. U.S. Army Field Manual 100-5, pp. 2-3.

27. O'Connor, p. 21.

28. Jeffrey S. Wiltse, "Training to Prevent Fratricide," Armor, July-August, 1991.

29. Shrader, p. 107.

30. Ibid.

## BIBLIOGRAPHY

- Bond, David F. "Army Speeds Helicopter Enhancements in Response to Desert Storm Problems." Aviation Week and Space Technology. April 1, 1991, 24-25.
- Browne, Malcolm W. "Science Times: Death Toll from Allies in Warfare May Be 15%." The New York Times. May 18, 1993, C11.
- Distler, Bill. "Friendly Fire: War and Naivete." Christianity and Crisis, April 8, 1991, 100.
- Garfield, Brian. The Thousand Mile War. Garden City: Doubleday & Company, 1969.
- Garrett, William B. "Fratricide: Doctrine's Role in Reducing Friendly Fire." Ft. Leavenworth, KS: School of Advanced Military Studies monograph, 1993.
- Goldsmith, Martin. "Applying the National Training Center Experience: Incidence of Ground-to-Ground Fratricide." Santa Monica, CA: RAND Corporation, February 1986, 28.
- Hackworth, David H. "Lessons of a Lucky War." Newsweek, March 11, 1991.
- \_\_\_\_\_. "Killed by Their Comrades." Newsweek, November 18, 1991, 45-46.
- Hammer, Joshua. "Risking Friendly Fire." Newsweek, March 9, 1991, 33.
- Harmeyer, George H., and Antal, John F. "Fire Discipline and Fratricide." Army, March 1992, 26-28.
- Hillman, James L. "Task Force 1-41 Infantry: Fratricide Experience in Southwest Asia." Carlisle Barracks: U.S. Army War College Military Studies Paper, 1993.
- Lancaster, John. "Pentagon Delays Electronic System Designed to Curb Friendly Fire." The Washington Post, December 1993, A11.
- O'Conner, Michael P. "Fratricide: A Preventable Technological Disease." Carlisle Barracks, PA: U.S. Army War College Student Paper, 1992.
- Office of the Assistant Secretary of Defense, Public Affairs. Briefing: Findings into the Circumstances Surrounding Shoot Down of Two U.S. Helicopters by U.S. Fighters. July 1994.

Office of the Assistant Secretary of Defense, Public Affairs.  
News Release, No. 917-9411, Helicopter Shootdown Report.  
July 13, 1994.

Parker, John. "Families Speak Out on Downings." The Daily Oklahoman, June 7, 1995, A11.

Parker, John. "ID of Helicopters by Electronics Claimed Possible." The Daily Oklahoman, June 10, 1995, p. A1.

Parker, John. "Officer Failed to Warn Pilots, Tinker Jury Told." The Daily Oklahoman, June 11, 1995, p. A1.

Parker, John. "Fighter Pilots Broke Rules, Ex-Chief Says." The Daily Oklahoman, June 14, 1995, p. A1.

Powell, Stewart M. "Friendly Fire." Air Force Magazine.  
December 1991, 58-63.

Shrader, Charles R. "Americide: The Problem of Friendly Fire in Modern War." Ft. Leavenworth: U.S. Army Command and General Staff College, Combat Studies Institute, December 1992.

\_\_\_\_\_. Friendly Fire: the Inevitable Price. Carlisle Barracks, PA: Parameters, Autumn, 1992.

U.S. Department of the Air Force. Air Force Manual 1-1, Vol. I.  
March 1992.

U.S. Department of the Air Force. Air Force Manual 1-1, Vol. II.  
March 1992.

U.S. Department of the Army. Field Manual 7-5, Organization and Tactics of Infantry, The Rifle Battalion. Washington, DC: 1940.

U.S. Department of the Army. Field Manual 7-10, Rifle Company, Rifle Regiment. Washington, DC: December 1942.

U.S. Department of the Army. Field Manual 100-5, Operations.  
Washington, DC: June 1993.

U.S. Department of the Army. Fratricide Risk Assessment for Company Leadership. Ft. Leavenworth: U.S. Army Command and General Staff College, Center for Army Lessons Learned, March 1992.

U.S. Department of the Army. Fratricide: Reducing Self-Inflicted Losses. Ft. Leavenworth: U.S. Army Command and General Staff College, Center for Army Lessons Learned, June 1993.

- U.S. Department of the Navy. Armor/Antiarmor Operations in Southwest Asia. Marine Corps Research Center, July 1991.
- U.S. General Accounting Office. Operation Desert Storm: Apache Helicopter Fratricide Incident. Report to the Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce. Washington: House of Representatives, June 1993.
- U.S. General Accounting Office. Operation Desert Storm: Investigation of a U.S. Army Fratricide Incident. Testimony by Richard C. Steener. Washington: House of Representatives, June 1995.
- van Voorst, Bruce. "They Didn't Have to Die." Time Magazine. August 8, 1991, 20.
- von Clausewitz, Carl. On War. Edited and translated by Peter Paret and Michael Howard. Princeton: Princeton University Press, 1984.
- Wiltse, Jeffrey S. "Training to Prevent Fratricide." Armor, July-August, 1991, 46-48.